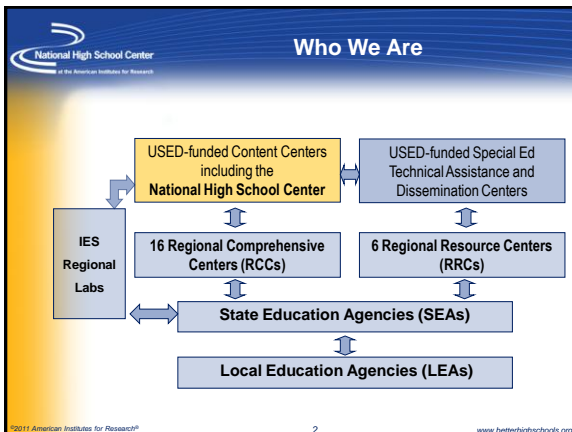**National High School Center**
at the American Institutes for Research

A Demonstration of an Early Warning Intervention and Monitoring System Process and Tool

October 3, 2011

Presenters:

Mindee O'Cummings

National High School Center

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Who We Are

USED-funded Content Centers including the **National High School Center**	USED-funded Special Ed Technical Assistance and Dissemination Centers

IES Regional Labs	**16 Regional Comprehensive Centers (RCCs)**	**6 Regional Resource Centers (RRCs)**

State Education Agencies (SEAs)

Local Education Agencies (LEAs)

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Objectives

- Provide an overview of the background and research base for early warning systems
- Discuss the evolution of the Early Warning Intervention and Monitoring System (EWIMS)
- Introduce the seven-step early warning system implementation process
- Demonstrate the EWIMS

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Sobering Statistics…

- Nearly one-third of all high school students leave the public school system before graduating
- 1.2 million students drop out of high school each year – that's 12 million over the next decade
- 7,000 students drop out of high school every day
- 15% of the high schools in the U.S. produce 50% of our dropouts – schools Balfanz and Legters call "dropout factories"

Balfanz, R. and Legters, N. (2006, July 12). *The graduation rate crisis we know and what can be done about it*. Retrieved online from http://web.jhu.edu/bin/a/b/Crisis_Commentary.pdf

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Economic Consequences

- A new high school dropout in 2000 had less than a 50% chance of getting a job
- That job earned less than half of what the same job earned 20 years ago
- Lack of education is strongly correlated with welfare dependency and incarceration
- Cutting the number of dropouts in half would reap $45 billion in revenues and decreased costs (Levin et al., 2007)

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Early Warning Systems

Early warning systems (EWS) rely on readily available data housed at the school to:

- Predict which students are at-risk for dropping out of high school
- Target resources to support off-track students while they are still in school, before they drop out
- Examine patterns and identify school climate issues

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9th Grade is a Critical Year

- Ninth grade is a "make or break year"
  - More students fail 9th grade than any other high school grade
  - A disproportionate number of students who are held back in 9th grade subsequently drop out
- Monitoring students' progress throughout 9th grade—and even during the first semester—provides powerful indicators that can predict whether students will complete high school:
  - Engagement
  - Course performance
  - Chicago's "On-Track" Indicator (CCSR End-of-Year)

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Key Indicators

Engagement
- Attendance/absenteeism

Course Performance
- Course grades
- Number of credits earned

CCSR End-of-Year Indicator
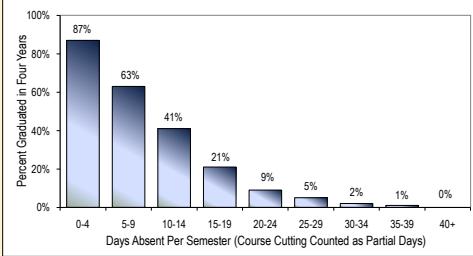- Core course performance & accumulated credits

> **Research from several U.S. school districts provides a strong foundation for defining 9th grade warning signs that students might drop out, but local adaptation is key.**

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"High-Yield" Academic Indicators: Attendance

Four-Year Graduation Rates for CPS Students Entering High School in 2001, by 9th Grade Absences (Allensworth & Easton, 2007)

Percent Graduated in Four Years (y-axis: 0% to 100%)

- 0-4: 87%
- 5-9: 63%
- 10-14: 41%
- 15-19: 21%
- 20-24: 9%
- 25-29: 5%
- 30-34: 2%
- 35-39: 1%
- 40+: 0%

Days Absent Per Semester (Course Cutting Counted as Partial Days)

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"High-Yield" Academic Indicators: Course Failures

Four-Year Graduation Rates for CPS Students Entering High School in 2001, by Freshman Course Failures (Allensworth & Easton, 2007)

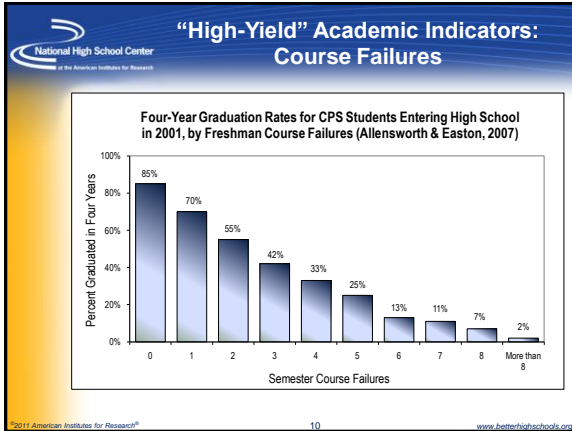©2011 American Institutes for Research®   10   www.betterhighschools.org

"High-Yield" Academic Indicators: GPA

Four-Year Graduation Rates for CPS Students Entering High School in 2001, by Freshman GPA (Allensworth & Easton, 2007)

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Chicago's "On-track" Indicator

Students are "on-track" if they:

1. have not failed more than one semester long core course, AND
2. have accumulated enough credits for promotion to the 10th grade.

Number of Semesters with Fs in Core Courses	# of Credits Accumulated Freshman Year	
	Less than 5	5 or more
2 or more courses	Off-track	Off-track
0 or 1 courses	Off-track	On-track

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"High Yield" 9th Grade Indicators

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Indicators	Benchmark (flagged)
Absenteeism	Missing 10% or more of instructional time
Course failures	One or more failed courses
Grade point average	2.0 or lower (on a 4-point scale)
CCSR End-of-Year Indicator	Fail two or more semester core courses, or accumulate fewer credits than the number required for promotion to the 10th grade

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Evolution of the EWIMS

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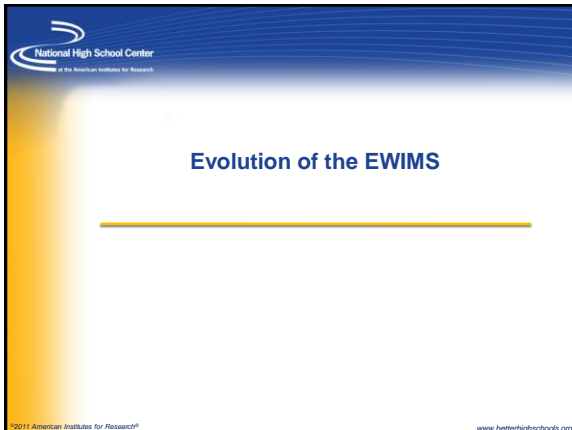
EWIMS Tool Development

Since the development of v1.0, we have done the following:

- Customized the tool for two states, including adding indicators (e.g., middle school indicators) and reporting features.
- Trained users at the state, district, and school levels to use customized versions of the tool (including approximately 19 districts and 30 schools).
- Collaborated with CCSR on a study validating the indicators for students with disabilities (Gwynne, Lesnick, Hart & Allensworth, 2009).

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EWIMS

Based on this work over the past two years, we conceptualized the EWS Tool v2.0. This version has new features including the capability to:

- Import data
- Accommodate local contextual factors for high schools (e.g., semesters vs. trimesters vs. quarters)
- Include locally-defined pre-high school risk indicators (based on student data from middle school)
- Modify the benchmarks/thresholds based on analysis of longitudinal data (i.e., indicator validation)
- Disaggregate data by locally defined cohorts

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EWIMS

New features, continued:

- House an inventory of dropout prevention interventions
- Assign students to intervention programs and monitor student response and progress in the interventions over the course of the school year
- Create pre-set school-level summary reports, detailed student-level reports, and individual student reports
- Create customized student-level reports

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Risk Indicators in the EWIMS

Indicator	Time Frame	Benchmark (red flag)
Pre-High School Indicators	Prior to the start of school	Exhibited locally validated indicators of risk
Attendance	First 20 or 30 days, each grading period, end of year (annual)	Missed 10% or more of instructional time (absences)
Course Failures	Each grading period, end of year (annual)	Failed one or more semester courses (any subject)
Grade Point Average	Each grading period, end of year (annual)	Earned 2.0 or lower (on a 4-point scale)
CCSR End of Year (On-Track) indicator	End of year (annual)	Failed two or more semester core courses, or accumulated fewer credits than the number required for promotion to the next grade

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The EWIMS Implementation Process

7-Step EWIMS Implementation Process

STEP 1
Establish roles and responsibilities

STEP 2
Use the EWS Tool

STEP 3
Review the EWS data

STEP 4
Interpret the EWS data

STEP 5
Assign and provide interventions

STEP 6
Monitor students

STEP 7
Evaluate and refine the EWS process
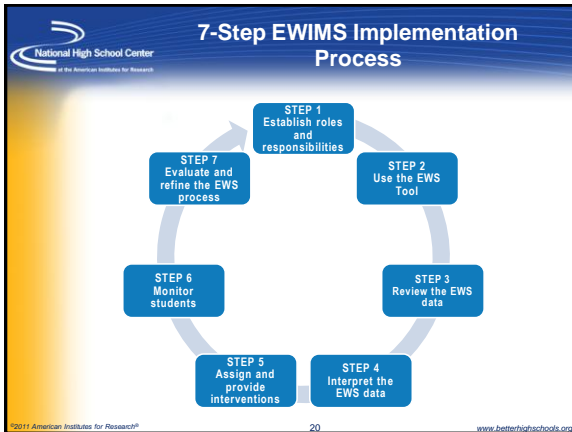
Step One:
Establish Roles and Responsibilities

- EWIMS teams need to include individuals who have:
  – Authority to make decisions
  – Knowledge of diverse students
  – Expertise to manage and analyze data
- EWIMS team are required to:
  – Meet regularly
  – Communicate EWS/dropout prevention issues to groups/individuals outside of the team
  – Solicit feedback from stakeholders (leaders, staff, students, parents)
  – Monitor students' progress

Step Two:
Use the EWIMS Tool v2.0

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- In order to be used as an effective tool to support EWIMS team work:
  – Data must be regularly entered/imported throughout the school year
  – At least one individual should be responsible for ensuring the EWIMS is loaded with the latest data
  – EWIMS Team members must be trained to understand the use of the tool
  – Reports must be used to make decisions about students
  – Students must be assigned to interventions and progress monitored

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Step Three:
Review EWIMS Data

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- EWIMS data are reviewed and monitored to identify students at risk for dropping out and to understand patterns in student engagement and academic performance

- Questions to ask about EWIMS data:
  – *Student-level patterns:* What do your data tell you about individual students who are at-risk?
  – *School-level patterns:* What do your data tell you about how the school is doing?
    - Are students who were flagged from the beginning remaining "off-track" through the year?
    - Are students who were flagged at one reporting period back "on-track" at the next?

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Step Four:
Interpret EWIMS Data

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- The EWIMS team must look BEYOND the indicators and dig deeper into reasons for student disengagement with school and academic failure

  – Indicators are just observable symptoms, *not root causes*

  – It is important to examine additional data from a variety of sources not included in the tool (e.g., talking to classroom teachers, parents, individual students, other adults in the school)

- Looking at data beyond those in the EWIMS can help identify individual and common needs among groups of students and raise new questions for understanding students' reasons for being off-track for graduation

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Step Four:
Interpret EWS Data (cont.)

- Understanding characteristics of students at-risk of dropout is important because:

  – Decisions to persist or drop out are affected by multiple contextual factors - family, school, neighborhood, peers

  – Personal and school factors contribute to success or failure during the freshman year

  – Attendance and course performance problems are distinct indicators in the EWIMS but are highly interrelated, and both can signal disengagement

  – Student background characteristics are less important in explaining failures than behaviors in high school

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Step Five:
Assign and Provide Interventions

- The EWIMS team matches individual students to specific interventions after having gathered information about:

  – Potential root causes for individual flagged students

  – The available dropout prevention and academic and behavioral support programs in the school, district, and community

- A tiered approach can be used to match students to interventions based on their individual needs

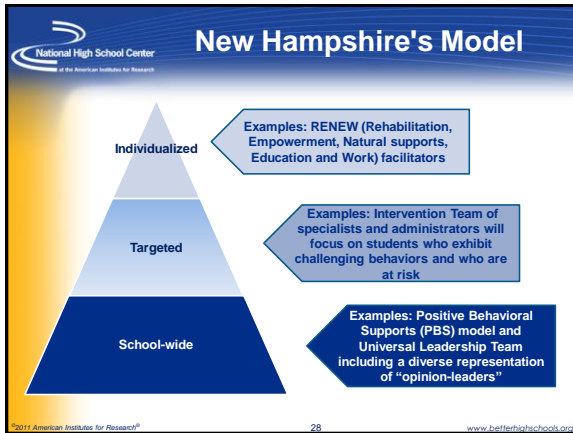*©2011 American Institutes for Research®* 26 www.betterhighschools.org
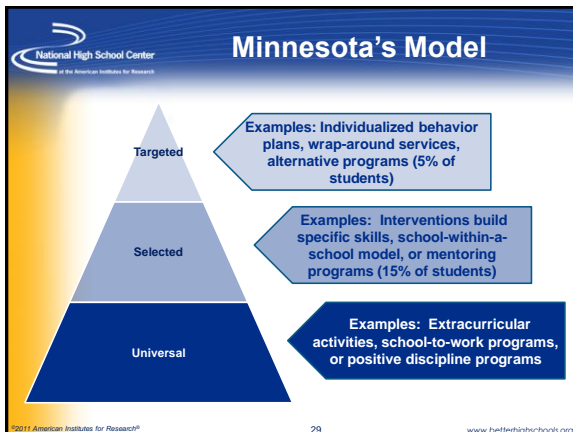
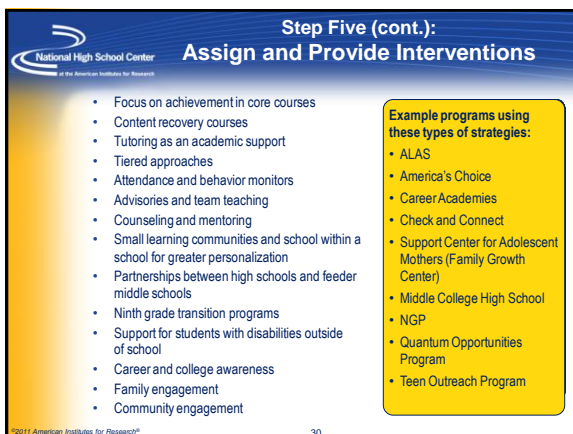**Tiered Approach to**
Dropout Prevention

Tier Three
Individualized

Tier Two
Targeted

Tier One
Universal

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New Hampshire's Model

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Individualized

Examples: RENEW (Rehabilitation, Empowerment, Natural supports, Education and Work) facilitators

Targeted

Examples: Intervention Team of specialists and administrators will focus on students who exhibit challenging behaviors and who are at risk

School-wide

Examples: Positive Behavioral Supports (PBS) model and Universal Leadership Team including a diverse representation of "opinion-leaders"

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Minnesota's Model

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Targeted

Examples: Individualized behavior plans, wrap-around services, alternative programs (5% of students)

Selected

Examples: Interventions build specific skills, school-within-a-school model, or mentoring programs (15% of students)

Universal

Examples: Extracurricular activities, school-to-work programs, or positive discipline programs

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Step Five (cont.): Assign and Provide Interventions

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- Focus on achievement in core courses
- Content recovery courses
- Tutoring as an academic support
- Tiered approaches
- Attendance and behavior monitors
- Advisories and team teaching
- Counseling and mentoring
- Small learning communities and school within a school for greater personalization
- Partnerships between high schools and feeder middle schools
- Ninth grade transition programs
- Support for students with disabilities outside of school
- Career and college awareness
- Family engagement
- Community engagement

Example programs using these types of strategies:
- ALAS
- America's Choice
- Career Academies
- Check and Connect
- Support Center for Adolescent Mothers (Family Growth Center)
- Middle College High School
- NGP
- Quantum Opportunities Program
- Teen Outreach Program

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Step Six:
Monitor Students and Interventions

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- The EWIMS team monitors students who are participating in interventions to:
  - Make necessary midcourse corrections by identifying students' whose needs are not being met
  - Identify new interventions that will to meet students' needs
  - Use data to monitor the effectiveness of interventions offered
    - Increase knowledge about the general effectiveness of interventions
    - Improve the matching of students to interventions
  - Communicate with families and appropriate stakeholders and solicit their involvement in the monitoring process

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Step Seven:
Evaluate and Refine the EWIMS Process

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- Refine the EWS Implementation Process
  - During the school year
  - At the end of a school year
- Identify short- and long-term needs and solutions
  - Student needs
  - Organizational needs (school and/or division)

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Step Seven:
Evaluate and Refine the EWIMS Process

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- Validate the indicators to maximize predictive power of the system

Graduated in 4 (or 5) Years?	Displayed Early Warning Sign in 9th Grade?	
	YES	**NO**
YES	*False Positive (or Effective Intervention)*	**Accurate Prediction**
NO	**Accurate Prediction**	*False Negative*

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EWIMS Demonstration

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Available Resources

National High School Center's Early Warning System Web page:
http://www.betterhighschools.org/ews.asp

- Early Warning Intervention and Monitoring System, as well as supporting materials
- *Early Warning Intervention and Monitoring System Implementation Guide*
- *What Matters for Staying On-Track and Graduating in Chicago Public Schools: A Focus on Students with Disabilities*
- *Developing Early Warning Systems to Identify Potential High School Dropouts*
- *Approaches to Dropout Prevention: Heeding Early Warning Signs With Appropriate Interventions*

Additional Resources Available on our Web site:

- *A Coherent Approach to High School Improvement: A District and School Self-Assessment Tool*
- *Educating English Language Learners at the High School Level: A Coherent Approach to District- and School-Level Support*

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Contact Us

Have a question about EWIMS?
Email us at **ews@betterhighschools.org**

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